

LISTING OF THE CLAIMS:

This listing of the claims replaces all prior versions, and listings, of claims in the application. Please amend claims 6 and 8.

1                   1. (previously presented) A system for indicating the location of an energy  
2 zone on an object surface, with the energy zone being an area on the object surface that is  
3 imaged onto an IR detector by the IR optical system included in a non-contact IR thermal  
4 measurement device, said system comprising:  
5                   a video sub-system for displaying a displayed image of at least a part of the  
6 object surface not included in the energy zone and of at least a part of the object surface  
7 included in the energy zone;  
8                   a range-finding sub-system for measuring the distance between the non-  
9 contact IR thermal measurement device and the object surface and outputting a distance  
10 signal indicating a measured distance; and  
11                   an optical overlay sub-system, coupled to the range-finding sub-system, for  
12 overlaying a shape outline, having a dimension determined by a received measured distance,  
13 over the displayed image of the object surface and with the shape outline indicating the extent  
14 of a displayed image included in the energy zone.

1                   2. (original) The system of claim 1 where the range-finding sub-system  
2 comprises:  
3                   a laser diode for emitting a laser-beam along a first optical axis;  
4                   a position-sensitive photodiode, having a major surface and displaced from the  
5 first optical axis, for receiving a portion of the laser beam reflected from the object surface  
6 and indicating the position of a reflected portion on the major surface.

1                   3. (original) The system of claim 2 where the first axis is substantially  
2 coincident with the optical axis of the IR optical system so that the laser beam indicates the  
3 center of the energy zone.

1                   4. (original) The system of claim 1 where the video-subsystem comprises:

2 a digital image generating chip for outputting digital image data, a display  
3 device for displaying digital image data, and an image controller chip for controlling the  
4 display device to display digital image data provided by the image generating chip;  
5 and where the optical overlay subsystem includes:  
6 a storage device for storing circle data utilized to form circle images of  
7 different diameters;  
8 and with the image controller coupled to the storage device and the range-  
9 finding sub-system, programmed to select circle data from the storage device for generating  
10 a circle having a diameter size determined by the measured distance provided by the range-  
11 finding sub-system.

1 5. (original) The system of claim 1 where the shape outline is a circle.

1 6. (currently amended) A method for indicating the location of an energy zone  
2 on an object surface, with the energy zone being an area on the object surface that is imaged  
3 onto an IR detector by the IR optical system included in a non-contact IR thermal  
4 measurement device, said method comprising steps of:  
5 acquiring a digital image of the object surface;  
6 displaying a digital image of the object, with the digital image including a part  
7 of the object surface not included in the energy zone;  
8 measuring the distance to the object surface to obtain a distance value;  
9 forming a geometrical shape indicating the portion of the object surface  
10 indicating the portion of the object surface included in the energy zone with a dimension of  
11 the geometrical shape determined by the distance value; and  
12 overlaying the geometrical shape over the digital image of the object surface  
13 to indicate the location of the energy zone.

1 7. (original) The method of claim 6 where the step of forming a geometrical  
2 image further comprises the step of:  
3 compensating for parallax between the acquired digital image and an optical  
4 axis of the IR optical system.

1                   8. (currently amended) A system for indicating the location of an energy zone  
2 on an object surface, with the energy zone being an area on the object surface that is imaged  
3 onto an IR detector by the IR optical system included in a non-contact IR thermal  
4 measurement device, said system comprising:

5                   means for acquiring a digital image of the object surface;

6                   means for displaying a digital image of the object surface, with the digital  
7 image including a part of the object surface not included in the energy zone;

8                   means for measuring the distance to the object surface to obtain a distance  
9 value;

10                  means for forming a geometrical shape indicating the portion of the object  
11 surface indicating the portion of the object surface included in the energy zone, with the  
12 geometrical shape having a dimension determined by the distance value; and

13                  means for overlaying the geometrical shape over the digital image of the  
14 object surface to indicate the location of the energy zone.

1                   9. (original) The system of claim 8 where the means for forming a  
2 geometrical image further comprises:

3                   means for compensating for parallax between the acquired digital image and  
4 an optical axis of the IR optical system.